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10/511,654	10/18/2004	Aaron Reel Bouillet	PU020122	2289

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EXAMINER	
WONG, ALLEN C	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<table>
<tr><td rowspan="4">Office Action Summary</td><td>Application No.</td><td colspan="2">Applicant(s)</td></tr>
<tr><td>10/511,654</td><td colspan="2">BOUILLET ET AL.</td></tr>
<tr><td>Examiner</td><td>Art Unit</td><td></td></tr>
<tr><td>Allen Wong</td><td>2621</td><td></td></tr>
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 June 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19 and 21* is/are rejected.

7)☒ Claim(s) *20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 October 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 6/24/08 have been fully read and considered but they are not persuasive.

Claim 19 is still objected to for minor informalities. On line 1 of claim 19, claim 19 is a method claim and the claim 17 is a system claim, since it is clear that since claim 19 is a method claim, the dependency of claim 19 should be changed to depend on the independent method claim 18 since applicant has changed the term “system” to “method” for claim 18. Appropriate correction is required.

After the amendments to claims 4-9, the 35 U.S.C.112, second paragraph is withdrawn.

Regarding lines 17-20 on page 6 and lines 4-7 on page 7 of applicant’s remarks, applicant asserts that Boyce does not disclose generating a second error signal. The examiner respectfully disagrees. In column 13, lines 1-7, Boyce’s figure 5 specifically discloses that element 507 produces the generation of the HP data stream, wherein the HP data stream includes sequence error codes, ie. second error signal, after the output of the Reed-Solomon decoder 506, ie. first error signal. Thus, Boyce teaches generating the second error signal after receiving the first error signal. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yamashita and Boyce, as a whole, for robustly producing high image quality for display with little packet loss that has low overhead and low delay, as suggested in Boyce’s column 3, lines 56-61.

Regarding lines 8-9 on page 7 of applicant's remarks, applicant states that there is no reason to modify Yamashita because Yamashita has an RS decoder. The examiner respectfully disagrees. In response to applicant's argument that there is no reason to modify the Yamashita reference with Boyce, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Yamashita does not specifically disclose the transport processor generating a second error signal after receiving the first error signal. However, in column 13, lines 1-7, Boyce's figure 5 specifically discloses that element 507 produces the generation of the HP data stream, wherein the HP data stream includes sequence error codes, ie. second error signal, after the output of the Reed-Solomon decoder 506, ie. first error signal. Thus, Boyce teaches generating the second error signal after receiving the first error signal. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yamashita and Boyce, as a whole, for robustly producing high image quality for display with little packet loss that has low overhead and low delay, as suggested in Boyce's column 3, lines 56-61. In fact, since both Yamashita and Boyce disclose the use of RS decoders, the combination of Yamashita and Boyce is deemed to be reasonable and valid in the art of image compression/decompression.

Independent claims 11 and 18 are rejected for at least similar reasons as independent claim 1 as stated above and in the rejection below. Dependent claims 2-10, 12-17, 19 and 21 are rejected for at least similar reasons as stated for independent claims 1, 11 and 18 as stated above and in the rejection below.

Claim 20 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Thus, the rejection is maintained.

Claim Objections

Claim 19 is objected to because of the following informalities: line 1 on claim 19, claim 19 is a method claim and the claim 17 is a system claim, since it is clear that since claim 19 is a method claim, the dependency of claim 19 should be changed to depend on the independent method claim 18 since applicant has changed the term “system” to “method” for claim 18. Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita (5,506,903) in view of Boyce (6,317,462).

Regarding claim 1, Yamashita discloses an apparatus for processing a received signal containing a datastream (col.6, ln.11-14 and fig.2 is an apparatus for processing a received datastream), comprising:

a signal decoder, the signal decoder generating a first error signal in response to indecipherable data received by the decoder (col.6, ln.49-53 and fig.2, element 23 is a Reed-Solomon decoder that generates a first error signal in response to unscrambled, indecipherable data received by the decoder); and

a transport processor, the transport processor receiving the first error signal, (col.6, ln.54-59, element 24 receives the first error signal produced by element 23 of fig.2).

Yamashita does not specifically disclose the transport processor generating a second error signal after receiving the first error signal. However, Boyce teaches generating the second error signal after receiving the first error signal (col.13, ln.1-7 and fig.5, element 507 generates the HP data stream that includes sequence error codes, ie. second error signal, after the output of the Reed-Solomon decoder 506, ie. first error signal). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yamashita and Boyce, as a whole, for robustly producing high image quality for display with little packet loss that has low overhead and low delay (Boyce's col.3, ln.56-61).

Regarding claim 2, Yamashita discloses wherein the datastream comprises a modulated signal containing data packets (fig.2, element 20 and col.6, ln.15-18).

Regarding claim 3, Yamashita discloses the transport bus, the transport bus forwarding data packets to subsequent processing stages (col.6, ln.54-59, element 24 receives the first error signal produced by element 23 of fig.2, in that the data must be transported by a transport bus or any bus that permits the transmission of data for transmitting data) and the synchronization signal (col.5, ln.38-45, frame synchronization pattern is within the system data of the received signal for permitting the synchronization of the video and audio data at the decoding end). Yamashita does not disclose the transport processor generating the second error signal in response to receiving the synchronization signal. However, Boyce teaches generating the second error signal in response to the synchronization signal being received by the transport processor (col.13, ln.1-7 and fig.5, element 507 generates the HP data stream that includes sequence error codes, ie. second error signal, after the output of the Reed-Solomon decoder 506, ie. first error signal, and the synchronization data that is included when decoding MPEG header data). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yamashita and Boyce, as a whole, for robustly producing high image quality for display with little packet loss that has low overhead and low delay (Boyce's col.3, ln.56-61).

Regarding claim 4, Yamashita discloses the transport bus (col.6, ln.54-59, element 24 receives the first error signal produced by element 23 of fig.2, in that the data must be transported by a transport bus or any bus that permits the transmission of data for transmitting data). Yamashita does not the second error signal. However, Boyce teaches the forwarding of the second error signal and with the data packets

associated with the second error signal (col.13, ln.1-7 and fig.5, element 507 generates the HP data stream that includes sequence error codes, ie. second error signal, after the output of the Reed-Solomon decoder 506, ie. first error signal, and the synchronization data that is included when decoding MPEG header data). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yamashita and Boyce, as a whole, for robustly producing high image quality for display with little packet loss that has low overhead and low delay (Boyce's col.3, ln.56-61).

Regarding claim 5, Yamashita does not disclose wherein the second error signal is formed as a series of logical high frames, each logical high frame being associated with a data packet. However, Boyce teaches generating the second error signal after receiving the first error signal (col.13, ln.1-7 and fig.5, element 507 generates the HP data stream that includes sequence error codes, ie. second error signal, after the output of the Reed-Solomon decoder 506, ie. first error signal). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yamashita and Boyce, as a whole, for robustly producing high image quality for display with little packet loss that has low overhead and low delay (Boyce's col.3, ln.56-61).

Regarding claim 6, Yamashita does not disclose wherein the duration of each logical high frame of the second error signal has a duration greater than the data packet associated with the logical high frame. However, Boyce teaches generating the second error signal after receiving the first error signal (col.13, ln.1-7 and fig.5, element 507 generates the HP data stream that includes sequence error codes, ie. second error signal, after the output of the Reed-Solomon decoder 506, ie. first error signal).

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yamashita and Boyce, as a whole, for robustly producing high image quality for display with little packet loss that has low overhead and low delay (Boyce's col.3, ln.56-61).

Regarding claim 7, Yamashita does not disclose wherein each logical high frame of the second error signal begins at an earlier time than the data packet associated with the logical high frame. However, Boyce teaches generating the second error signal after receiving the first error signal (col.13, ln.1-7 and fig.5, element 507 generates the HP data stream that includes sequence error codes, ie. second error signal, after the output of the Reed-Solomon decoder 506, ie. first error signal). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yamashita and Boyce, as a whole, for robustly producing high image quality for display with little packet loss that has low overhead and low delay (Boyce's col.3, ln.56-61).

Regarding claim 8, Yamashita does not disclose wherein each logical high frame of the second error signal ends at a later time than the data packet associated with the logical high frame. However, Boyce teaches generating the second error signal after receiving the first error signal (col.13, ln.1-7 and fig.5, element 507 generates the HP data stream that includes sequence error codes, ie. second error signal, after the output of the Reed-Solomon decoder 506, ie. first error signal). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of

Yamashita and Boyce, as a whole, for robustly producing high image quality for display with little packet loss that has low overhead and low delay (Boyce's col.3, ln.56-61).

Regarding claim 9, Yamashita discloses further comprising a demodulator, the demodulator deriving the synchronization signal from the received signal (fig.2, element 20 and col.6, ln.15-18).

Regarding claim 10, Yamashita discloses wherein the transport processor is implemented as a microprocessor (col.6, ln.54-59, element 24 receives the first error signal produced by element 23 of fig.2).

Regarding claim 11, Yamashita discloses a system for generating an error signal based on an error encountered while processing a received signal which includes an image representative datastream containing data packets (col.6, ln.11-14 and fig.2 is an apparatus for processing a received video datastream), comprising:

a forward error detecting and correcting decoder which generates a first error signal (col.6, ln.49-53 and fig.2, element 23 is a forward error detection unit, ie. Reed-Solomon decoder, that generates a first error signal in response to unscrambled, indecipherable data received by the decoder);

a synchronization signal derived from the received signal (col.5, ln.38-45, frame synchronization pattern is within the system data of the received signal for permitting the synchronization of the video and audio data at the decoding end);

a transport processor interconnected to receive the first error signal and the synchronization signal (col.6, ln.54-59, element 24 receives the first error signal produced by element 23 of fig.2).

Yamashita does not specifically disclose the transport processor generating a second error signal in response to the first error signal and the synchronization signal. However, Boyce teaches generating the second error signal after receiving the first error signal and the synchronization signal (col.13, ln.1-7 and fig.5, element 507 generates the HP data stream that includes sequence error codes, ie. second error signal, after the output of the Reed-Solomon decoder 506, ie. first error signal, and the synchronization data that is included when decoding MPEG header data). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yamashita and Boyce, as a whole, for robustly producing high image quality for display with little packet loss that has low overhead and low delay (Boyce's col.3, ln.56-61).

Regarding claim 12, Yamashita discloses further comprising a transport bus, the data packets being forwarded to subsequent processing stages via the transport bus (col.6, ln.54-59, element 24 receives the first error signal produced by element 23 of fig.2, in that the data must be transported by a transport bus or any bus that permits the transmission of data for transmitting data).

Regarding claim 13, Yamashita discloses the transport bus (col.6, ln.54-59, element 24 receives the first error signal produced by element 23 of fig.2, in that the data must be transported by a transport bus or any bus that permits the transmission of data for transmitting data). Yamashita does not the second error signal. However, Boyce teaches the forwarding of the second error signal and with the data packets associated with the second error signal (col.13, ln.1-7 and fig.5, element 507 generates the HP data stream that includes sequence error codes, ie. second error signal, after

the output of the Reed-Solomon decoder 506, ie. first error signal, and the synchronization data that is included when decoding MPEG header data). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yamashita and Boyce, as a whole, for robustly producing high image quality for display with little packet loss that has low overhead and low delay (Boyce's col.3, ln.56-61).

Regarding claim 14, Yamashita does not disclose wherein the data packets are forwarded as a series of discrete spaced apart frames, the second error signal being adapted to indicate an error in a defective data packet by having a duration that spans the frame of the defective data packet. However, Boyce teaches generating the second error signal as a series of discrete frames, each frame having a duration greater than an associated data packet (col.13, ln.1-7 and fig.5, element 507 generates the HP data stream that includes sequence error codes, ie. second error signal, to indicate defective packetized data, and after the output of the Reed-Solomon decoder 506, ie. first error signal, and col.6, ln.12-35, the series of discrete frames whereby each frame has a duration greater or larger than the associated packetized data). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yamashita and Boyce, as a whole, for robustly producing high image quality for display with little packet loss that has low overhead and low delay (Boyce's col.3, ln.56-61).

Regarding claim 15, Yamashita does not disclose wherein the second error signal assumes a logical low state when no error is present in a data packet. However, Boyce discloses that the second error signal is in low logical state when errors are not

detected (col.13, ln.1-7 and fig.5, element 507 generates the HP data stream that includes sequence error codes, ie. second error signal, after the output of the Reed-Solomon decoder 506, ie. first error signal, and if there is no error detected within the sequence codes, then the second error signal is in low logical status). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yamashita and Boyce, as a whole, for robustly producing high image quality for display with little packet loss that has low overhead and low delay (Boyce's col.3, ln.56-61).

Regarding claim 16, Yamashita discloses wherein the forward error detecting and correcting decoder is a Reed-Solomon decoder (col.6, ln.49-53 and fig.2, element 23 is a forward error detection unit, ie. Reed-Solomon decoder, that generates a first error signal in response to unscrambled, indecipherable data received by the decoder).

Regarding claim 17, Yamashita discloses wherein the transport processor is implemented as a microprocessor (col.6, ln.54-59, element 24 receives the first error signal produced by element 23 of fig.2).

Regarding claim 18, Yamashita discloses a method for processing a received signal containing an image representative datastream containing data packets, a packet error signal generating method (col.6, ln.11-14 and fig.2 is an apparatus for processing a received video datastream) comprising the steps of:

demodulating the received signal to produce a demodulated signal (fig.2, element 20 and col.6, ln.15-18);

error detecting the demodulated signal to produce a first error signal (col.6, ln.49-53 and fig.2, element 23 is a forward error detection unit, ie. Reed-Solomon decoder,

that generates a first error signal in response to unscrambled, indecipherable data received by the decoder);

forwarding the first error signal to a transport processor (col.6, ln.49-53 and fig.2, element 23 is a forward error detection unit, ie. Reed-Solomon decoder, that generates a first error signal in response to unscrambled, indecipherable data received by the decoder); and

forwarding a synchronization signal to the transport processor, thereby associating the first error signal with a particular data packet (col.5, ln.38-45, frame synchronization pattern is within the system data of the received signal for permitting the synchronization of the video and audio data at the decoding end).

Yamashita does not specifically disclose generating a second error signal in response to the synchronization signal being received by the transport processor. However, Boyce teaches generating the second error signal in response to the synchronization signal being received by the transport processor (col.13, ln.1-7 and fig.5, element 507 generates the HP data stream that includes sequence error codes, ie. second error signal, after the output of the Reed-Solomon decoder 506, ie. first error signal, and the synchronization data that is included when decoding MPEG header data). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yamashita and Boyce, as a whole, for robustly producing high image quality for display with little packet loss that has low overhead and low delay (Boyce's col.3, ln.56-61).

Regarding claim 19, Yamashita does not disclose further comprising the step of generating the second error signal as a series of discrete frames, each frame having a duration greater than an associated data packet. However, Boyce teaches generating the second error signal as a series of discrete frames, each frame having a duration greater than an associated data packet (col.13, ln.1-7 and fig.5, element 507 generates the HP data stream that includes sequence error codes, ie. second error signal, after the output of the Reed-Solomon decoder 506, ie. first error signal, and col.6, ln.12-35, the series of discrete frames whereby each frame has a duration greater or larger than the associated packetized data). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yamashita and Boyce, as a whole, for robustly producing high image quality for display with little packet loss that has low overhead and low delay (Boyce's col.3, ln.56-61).

Regarding claim 21, Yamashita discloses wherein the error detecting step comprises Reed-Solomon error detection and correction (col.6, ln.49-53 and fig.2, element 23 is a forward error detection unit, ie. Reed-Solomon decoder, that generates a first error signal in response to unscrambled, indecipherable data received by the decoder).

Allowable Subject Matter

1. Claim 20 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

2. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not specifically disclose further comprising the steps of: starting each discrete second error signal frame before an associated data packet begins; and stopping each discrete second error signal frame after an associated data packet ends, and that claim 20 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341.

The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Allen Wong/
Primary Examiner
Art Unit 2621

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9/10/08